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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/521,676	09/12/2005	Javaan Singh Chahl	529172000800	9235

25226 7590 07/09/2008
MORRISON & FOERSTER LLP
755 PAGE MILL RD
PALO ALTO, CA 94304-1018

EXAMINER

TRAN, DALENA

ART UNIT	PAPER NUMBER
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3664

MAIL DATE	DELIVERY MODE
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07/09/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/521,676	Applicant(s) CH AHL ET AL.	
	Examiner Dalena Tran	Art Unit 3664	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-54 is/are pending in the application.
- 4a) Of the above claim(s) 26-32 and 47-52 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 10-25, 33-35, 39-46, 53 and 54 is/are rejected.
- 7) ☒ Claim(s) 4-9 and 36-38 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/7/06</u> . | 6) <input type="checkbox"/> Other: _____ |

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APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
10521676	9/12/05	CHAHN ET AL.	529172000800

MORRISON & FOERSTER LLP
755 PAGE MILL RD
PALO ALTO, CA 94304-1018

EXAMINER

Dalena Tran

ART UNIT	PAPER
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3664	20080704
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DATE MAILED:

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner for Patents

DETAILED ACTION

Notice to Applicant(s)

1. This office action is response to the elected group I, claims 1-25, 33-46, and 53-54. Claims 1-25, 33-46, and 53-54 are pending.

The prior art submitted on 3/7/06 has been considered.

There are no steps a-d in claims 1, 17, 33, and 41. Non-elected claims 26-32, and 47-52 should be cancelled.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3, 10-17, 19-25, 33-35, 39-46, and 53-54, are rejected under 35 U.S.C. 102(b) as being anticipated by J.M. Slater (2740961).

As per claims 1, and 53, J.M. Slater discloses a method for controlling an attitude of a vehicle in a space having at least two opposed viewable regions about said vehicle, each region being viewed by a respective first sensor for sensing a first frequency band of electromagnetic radiation and a respective second sensor for sensing a second frequency band of electromagnetic radiation (see columns 1-2, lines 64-42), method including the steps of: producing a first data set from said first sensor viewing a first of regions; producing a second data set from said second sensor viewing first region (see column 3, lines 23-46); modifying said second data set (see column 5, lines 9-27); combining the result of said modifying step with said first data set to form a third data set for said first

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region (see column 5, lines 43-67); repeating steps a) to d) for a second set of first and second sensors viewing an opposed viewable region; and adjusting the attitude of vehicle until respective third data sets for each opposed viewable region are substantially equal (see column 6, lines 14-50; columns 7-8, lines 17-75; and column 11, lines 20-45).

As per claim 2, J.M. Slater discloses steps of modifying and combining reduces a bias introduced by a source of electromagnetic radiation in a viewable region (see columns 9-10, lines 56-29; and columns 10-11, lines 57-20).

As per claim 3, J.M. Slater discloses measurements by each of second sensors in said second frequency band are substantially sensitive to said electromagnetic source and relatively insensitive to intensity differences between the sky and ground in said second frequency band (see columns 6-7, lines 51-16).

As per claim 10, J.M. Slater discloses first frequency band of electromagnetic radiation is in the ultraviolet frequencies and said second frequency band is in the green spectra frequencies and the source of electromagnetic radiation is the sun (see column 5, lines 1-8).

As per claim 11, J.M. Slater discloses at least of one first and second frequency bands corresponds to the mm wavelength band (see columns 5-6, lines 67-11).

As per claims 12-14, J.M. Slater discloses opposed viewable regions are to the left and right of said vehicle and the attitude of the vehicle controlled is roll; opposed viewable regions are fore and aft of said vehicle and the attitude of the vehicle controlled is pitch (see columns 3-4, lines 47-27).

As per claim 15, J.M. Slater discloses first and second data sets corresponding to the aft viewable region are generated by modifying and combining respective first and

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second data sets from said left and right viewable regions thereby eliminating the requirement for sensors viewing said aft region (see column 11, lines 45-67).

As per claim 16, J.M. Slater discloses a vehicle whose attitude is being controlled (see column 5, lines 28-42).

As per claim 17, J.M. Slater discloses a method for calculating the attitude of a vehicle in a space having a viewable region, said region being viewed by a first and second pair of sensors, each of first and second pair including a first sensor for sensing a first frequency band of electromagnetic radiation and a second sensor for sensing a second frequency band of electromagnetic radiation, said first pair of sensors being tilted a first predetermined angle to view a first sub-region substantially above and including a horizon, and said second pair of sensors being tilted a second predetermined angle to view a second sub-region substantially below and including the horizon (see columns 1-2, lines 64-42), the method including the steps of: producing a first data set from first sensor of first pair; producing a second data set from said second sensor of said first pair (see column 3, lines 23-46); modifying said second data set (see column 5, lines 10-27); combining the result of said modifying step with said first data set to form a third data set for first pair (see column 5, lines 43-66); repeating steps a) to d) for said first and second sensors of said second pair; determining a relationship between a change in intensity between said third data sets and said vehicle attitude (see column 6, lines 14-50; and columns 7-8, lines 17-76); and calculating said vehicle attitude from relationship (see column 9, lines 1-55).

As per claim 19, J.M. Slater discloses calculating the rate of change of vehicle attitude (see column 11, lines 20-45).

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Claims 20-21, and 22-25 are the same as claims 2-3, and 10-13 above. Therefore, they are rejected are the same as above.

Claims 33-35, 39-40, 41, 42-46, and 54, are apparatus claims corresponding to a method claims 1-3, 10-11, 17, 19-23, and 53 above. Therefore, they are rejected for the same rationales set forth as above.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 18, is rejected under 35 U.S.C.103(a) as being unpatentable over J.M. Slater (2740961) in view of R.P. Haviland (3162764).

As per claim 18, J.M. Slater does not disclose calculating an angular difference between first and second predetermined angles. However, R.P. Haviland discloses calculating an angular difference between first and second predetermined angles (see columns 1-2, lines 35-15; and column 6, lines 30-75). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of J.M. Slater by combining calculating an angular difference between first and second predetermined angles for controlling vehicle attitude.

6. Claims 4-9, and 36-38, are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

. Knoll (4483080)

. Billing-Ross et al. (5319969)

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalena Tran whose telephone number is 571-272-6968. The examiner can normally be reached on M-W (in a first week of a bi-week), and T-R (in a second week of bi-week) from 7:00AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Khoi H. Tran can be reached on 571-272-6919. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dalena Tran/
Primary Examiner, Art Unit 3664

July 4, 2008

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